

Application No. 10/661,807
Amendment dated February 21, 2006
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Amendment to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Previously Presented) An apparatus for providing rods for use in the manufacture of smoking articles, each rod having objects individually spaced at predetermined intervals along the length thereof, the apparatus comprising:
 - (a) means for providing a continuous supply of rod filler material;
 - (b) means for continuously supplying individual objects, such means including a first rotatable member having a horizontal pan for supporting a plurality of individual objects and a plurality of stems located at predetermined intervals around the periphery of the pan, said horizontal pan being substantially perpendicular to an axis of rotation of the first rotatable member, the stems having an object seat at an upper end of the stem and coupled with an actuator to rise and lower the seat from a position below the pan to a position above the pan as the horizontal pan rotates about a central axis, said horizontal pan including means for delivering said object from a radially inward portion of the pan to a radially outward peripheral portion of the pan proximate the object seat at the upper end of the stem;
 - (c) means for positioning the individual objects within the supply of filler material at predetermined intervals;
 - (d) means for forming a continuous rod having the individual objects positioned at predetermined intervals in the rod; and
 - (e) means for subdividing the continuous rod at predetermined intervals.

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2. (Previously Presented) The apparatus of claim 1 wherein the means for providing a continuous supply of rod filler material is a means for supplying a continuous web of filter material, and

wherein the means for positioning the individual objects at predetermined intervals within the web of filter material includes a second rotatable member having a plurality of pockets positioned at predetermined intervals along a peripheral face of the second rotatable member and within the pockets means for receiving the individual objects to place the object into the web of filter material.

3. (Original) The apparatus of claim 2 further including means for assuring ejection of each individual object within the web of filter material.

4. (Original) The apparatus of claim 3 wherein the means for assuring ejection include a supply of positive pressure air connected to a passage in communication with a pocket when the pocket is at a predetermined position proximate the web of filter material.

5. (Previously Presented) The apparatus of claim 2 wherein the means for receiving the individual objects is a hollow tube-shaped section positioned within the pockets and having a cylindrical-shaped side wall and a plurality of protrusions at least partly extending inwardly from the side wall, the protrusions being shaped to support the individual object.

6. (Original) The apparatus of claim 5 wherein the plurality of protrusions define a gap between the plurality of protrusions, the gap being sufficiently large to extend beyond the diameter of an object supported on the protrusions.

7. (Original) The method of claim 2 further comprising means for controlling the rate of rotation of the first rotatable member and the second rotatable member

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such that movement of a stem is synchronized with the movement of the pocket to permit transfer of an object from a stem to a pocket.

8. (Original) The apparatus of claim 1 wherein the means for supplying the individual objects further comprises a transfer tube having an inlet for the object above the pan and an outlet for the object below the pan.

9. (Original) The apparatus of claim 8 wherein the means for positioning the individual object includes a plow positioned proximate the filler material and having a port in communication with the outlet of the transfer tube.

10. (Original) The apparatus of claim 1 wherein the means for subdividing the continuous rod includes an object detection means for transmitting a signal representative of a location of an object within the rod to adjust the location where the rod is subdivided relative the object.

Claims 11-26 (Canceled)

27. (Currently amended) A process for manufacturing rods for use in the manufacture of smoking articles, each rod having objects individually spaced at predetermined intervals along the length thereof, the process comprising:

(a) continuously supplying rod filler material;

(b) continuously supplying individual objects by supporting a plurality of objects on a horizontal surface of a pan, said horizontal surface of the pan being substantially perpendicular to an axis of rotation of the pan, providing radially extending troughs on the horizontal surface of the pan, radially transferring the individual objects from a center portion of the horizontal surface of the pan to a plurality of holes at the periphery of said pan, rotating the pan to cause a plurality of stems received within said holes in the pan to rise above the pan to lift an object seated on the stem, and positioning the object within the supplied filler material;

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(c) forming a continuous rod having the individual objects positioned at predetermined intervals within the rod; and

(d) subdividing the continuous rod at predetermined intervals.

28. (Original) The process of claim 27 whereby a continuous web of filter material is supplied as rod filler material, and wherein the positioning of the individual objects comprises continuously inserting the objects at predetermined intervals within the supplied web of filter material.

29. (Original) The process of claim 28 wherein the continuously inserting comprises transferring the objects from the stem to a first position on a vertical rotating member and rotating the object from the first position to a second position within the web of filter material.

30. (Original) The process of claim 29 further comprising applying a vacuum to retain the object on the vertical rotating member at the first position and applying a positive pressure air supply to the object to eject the object from the vertical rotating member at the second position.

31. (Currently amended) The process of claim 29 further comprising synchronizing the rotations of the ~~horizontal~~ pan and the vertical rotating member such that a transfer tube on the ~~horizontal~~ pan aligns in communication with a pocket on the vertical rotating member when the object is transferred to the ~~rotating~~ vertical rotating member.

32. (Original) The process of claim 28 further comprising visually detecting the objects within the continuous rod and sending a signal indicative thereof to synchronize the subdividing of the rod at a location to space the objects relative the location of subdivision.

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Claims 33-35 (Canceled).

36. (Previously Presented) The apparatus of claim 1, wherein the means for delivering comprise swales between a center portion of the pan and the peripheral portion of the pan proximate the object seat at the upper end of the stem.

37. (Previously Presented) The apparatus of claim 2, wherein the means for supplying the individual objects further comprise transfer tubes having an inlet for the object above the pan and an outlet for the object below the pan, wherein the transfer tubes are positioned around the periphery of the first rotatable member such that the outlet of a transfer tube moves proximate to a pocket in the second rotatable member as the first rotatable member rotates the transfer tube into a position proximate the second rotatable member.

38. (Previously Presented) The method of claim 2, wherein the axis of rotation of the first rotatable member is perpendicular to an axis of rotation of the second rotatable member.

39. (Canceled)